

5. The semiconductor device according to claim 1, wherein a height or a depth of the convex concave region formed on the upper surface of the ferroelectric layer is half or smaller than the thickness of the ferroelectric layer, and is in a range from the same as to half the thickness of the upper electrode layer.

6. The semiconductor device according to claim 1, wherein a height or a depth of the convex or concave region formed on the upper surface of the ferroelectric layer is half or smaller than the thickness of the ferroelectric layer, and is in a range from the same as to half the thickness of the upper electrode layer, and a height or a depth of the convex or concave region formed on the upper surface of the lower electrode layer is half or smaller than the thickness of the lower electrode layer, and is in a range from the same as to half the thickness of the ferroelectric layer.